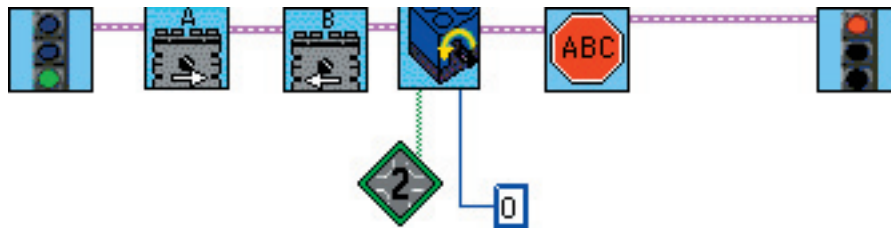


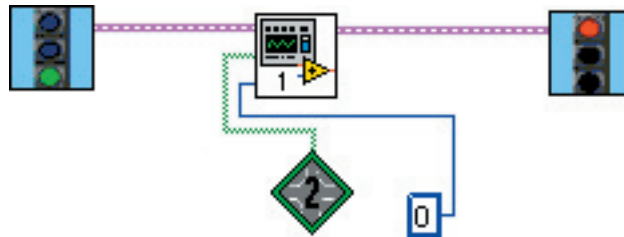
# Programming with Sub-VIs

A function called Sub-VI acts just like a subroutine but without all of the drawbacks listed in the previous activity. Your first challenge is to learn about Sub-VI, so that you can more effectively program your robot.

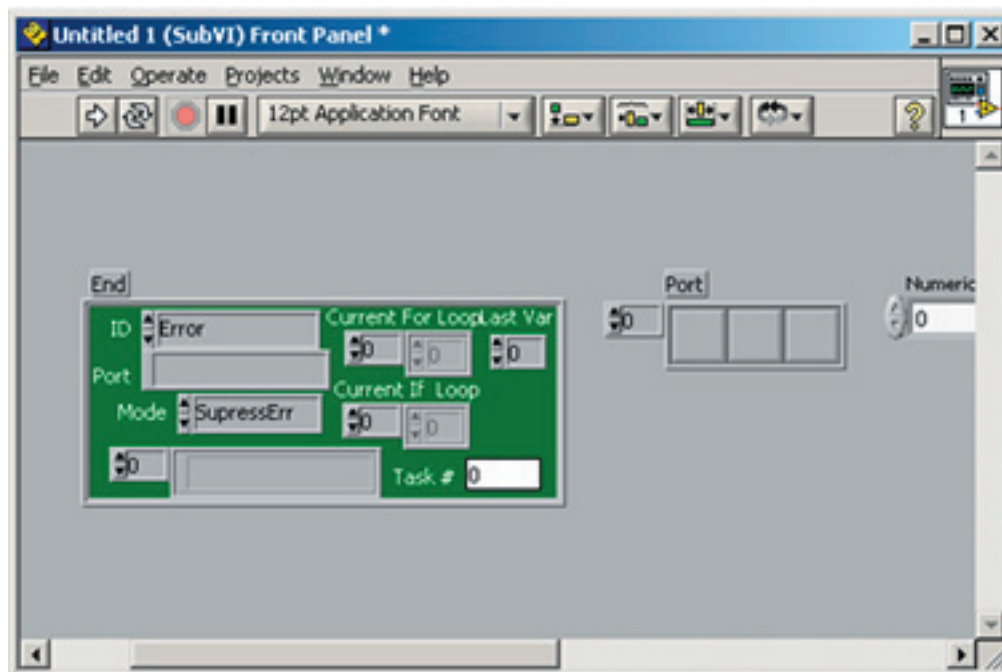
To create a Sub-VI, just write a program that you would like to make into the subroutine, such as this: This program uses a rotational sensor on port 2 to control your robot's right turn.



To create a Sub-VI, highlight all of the icons from the Motor A Forward icon through the Stop icon (IMPORTANT-DO NOT HIGHLIGHT THE MODIFIERS). After you've highlight these icons and their connecting wires, click Edit on the drop-down menu and then click Create SubVI. Your block diagram will look like this:



This new icon is a SubVI and it takes the place of all the icons in the previous example. Notice that the Port Modifier and Cut-off Rotation are still shown, so they can be changed. If you double click on the new icon, you'll see this screen:



# Programming with Sub-VIs - *Continued...*

In the upper right hand corner is a picture of the new icon. If you double click on it, a Paint picture of the icon will come up. This will allow you change what the icon looks like. When you are done, click File on the pull down menu and then click on Save As... When you save the SubVI, start its name with the letters VI, so you'll always know that this is a SubVI. In this case we'd probably save it as VI-Right Turn. You always want to give it a name that you can understand so you don't have any trouble knowing what the icon is supposed to do.